

Abstract of the Disclosure

Provided herein are novel phosphors useful in the manufacture of white light emitting diodes. The phosphors provided by the invention are described by the formulae:



and/or



in which x, and y are each independently any value between 0 and 1, including 0 and 1 subject to the proviso that the sum of x and y is equal to any number in the range of between about 0.75 and about 1.25; M is at least one of Be, Mg, Ca, Sr, Ba, Zn; A is at least one of Al, Ga, In, Y, La, and Gd; and wherein the activator(s), B, comprises one or more element selected from the group consisting of: Eu, Ce, Cu, Ag, Al, Tb, Cl, Br, F, I, Mg, Pr, K, Na, and Mn, including mixtures comprising any two, any three, any four, any five, any six, any seven, or more of these elements in any proportion, and wherein the elements in these mixtures may each independently be present in any amount between 0.0001 % and about 10 % in mole percent based on the total molar weight of said composition.

Standard techniques used in phosphor deposition for the manufacture of light emitting diodes which comprise phosphors may be employed to produce LED's having a white light output when the phosphors of the invention are utilized.